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(54) **Rotary head drum for a video tape recorder.**

(57) A rotary head drum for a video tape recorder includes a stationary lower drum member (35) having a base portion (35a) and inner and outer cylindrical portions (35b, 35c) extending generally upwardly from the base portion (35a) to define an internal cavity (51a) therebetween. A rotary assembly (37) is rotatably mounted on a rotor shaft (46) coaxial with the lower drum member (35) and has at least one rotary magnetic head (36) mounted thereon for recording digital signals on and reproducing the signals from a magnetic tape (30) wrapped about the

drum. A motor (52) for driving the rotary heads (36), a rotation detector (53) or tach generator for detecting the rotation of the motor (52), and a multi-channel rotary transformer (54) for transferring digital signals to and from the rotary head (36) are all housed in the cylindrical internal cavity (51a) surrounded by the base portion (35a), and inner and outer cylindrical portions (35b, 35c) of the lower drum member (35) which thereby reduces the overall axial height of the video tape recorder.

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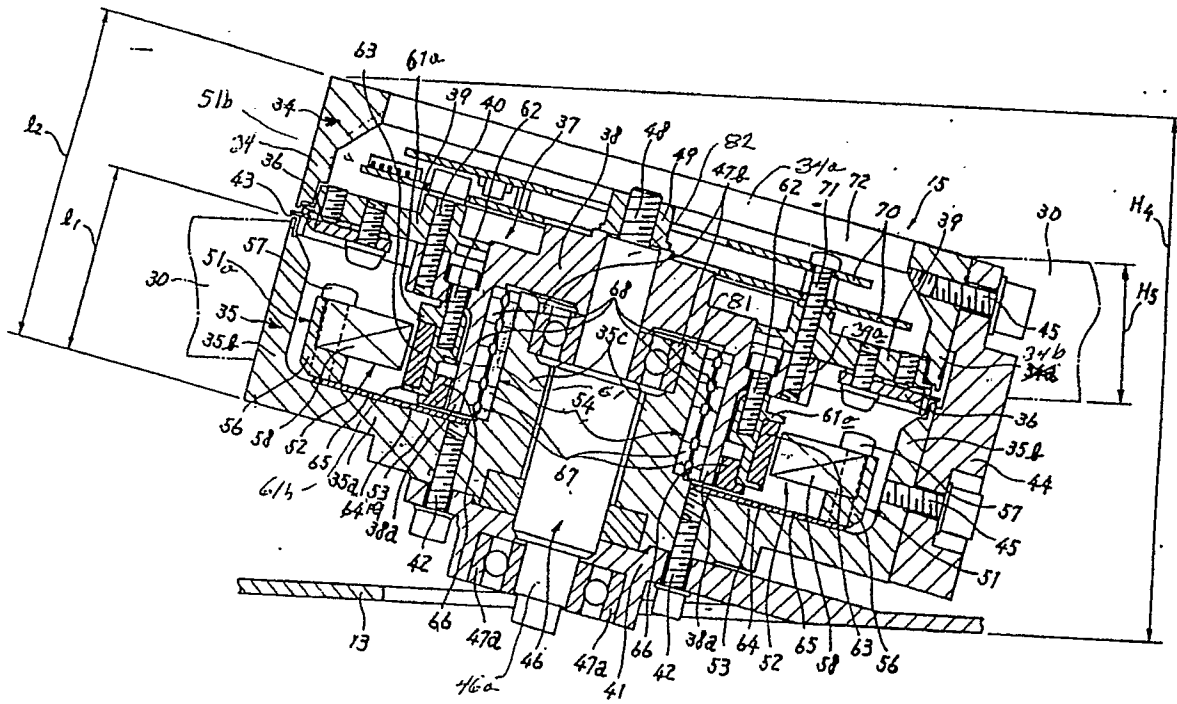


FIG. 4



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## EUROPEAN SEARCH REPORT

Application Number

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| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                             |                                               |                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------|
| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Citation of document with indication, where appropriate, of relevant passages                                                                                                                               | Relevant to claim                             | CLASSIFICATION OF THE APPLICATION (Int. Cl.5)          |
| X,A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | PATENT ABSTRACTS OF JAPAN vol. 10, no. 271<br>(P-497)(2327) 16 September 1986,<br>& JP-A-61 094215 (MATSUSHITA ELECTRIC INDUSTRIAL CO. LTD.) 13 May 1986,<br>* the whole document EP 90107543030 *<br>- - - | 1,3,7,9,2,<br>11-13,                          | G 11 B 5/53                                            |
| X,A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | PATENT ABSTRACTS OF JAPAN vol. 8, no. 144<br>(P-284)(1581) 5 July 1984,<br>& JP-A-59 042627 (MATSUSHITA DENKI SANGYO K.K.) 9 March 1984,<br>* the whole document *<br>- - -                                 | 1,7,9,17,<br>18                               |                                                        |
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| The present search report has been drawn up for all claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                             |                                               |                                                        |
| Place of search<br><br>Berlin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                             | Date of completion of search<br><br>30 May 91 | Examiner<br><br>GERARD E.A.S.                          |
| <div>CATEGORY OF CITED DOCUMENTS</div> <div>X: particularly relevant if taken alone<br/>Y: particularly relevant if combined with another document of the same category<br/>A: technological background<br/>O: non-written disclosure<br/>P: intermediate document<br/>T: theory or principle underlying the invention</div> <div>E: earlier patent document, but published on, or after the filing date<br/>D: document cited in the application<br/>L: document cited for other reasons<br/>-----<br/>&amp;: member of the same patent family, corresponding document</div> |                                                                                                                                                                                                             |                                               |                                                        |



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Application Number

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| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                                                                         |                                                                                                                                                                              |                                                                                                                                                                                                                               |                                               |
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| Category                                                                                                                                                                                                                                                                                                    | Citation of document with indication, where appropriate, of relevant passages                                                                                                | Relevant to claim                                                                                                                                                                                                             | CLASSIFICATION OF THE APPLICATION (Int. Cl.5) |
| A                                                                                                                                                                                                                                                                                                           | PATENT ABSTRACTS OF JAPAN vol. 12, no. 429<br>(P-785)(3276) 14 November 1988,<br>& JP-A-63 161504 (NEC HOME ELECTRONICS LTD) 5 July 1988,<br>* the whole document *<br>- - - | 18                                                                                                                                                                                                                            |                                               |
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| The present search report has been drawn up for all claims                                                                                                                                                                                                                                                  |                                                                                                                                                                              |                                                                                                                                                                                                                               | TECHNICAL FIELDS<br>SEARCHED (Int. Cl.5)      |
| Place of search                                                                                                                                                                                                                                                                                             |                                                                                                                                                                              | Date of completion of search                                                                                                                                                                                                  | Examiner                                      |
| Berlin                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                              | 30 May 91                                                                                                                                                                                                                     | GERARD E.A.S.                                 |
| <b>CATEGORY OF CITED DOCUMENTS</b><br>X: particularly relevant if taken alone<br>Y: particularly relevant if combined with another document of the same category<br>A: technological background<br>O: non-written disclosure<br>P: intermediate document<br>T: theory or principle underlying the invention |                                                                                                                                                                              | E: earlier patent document, but published on, or after the filing date<br>D: document cited in the application<br>L: document cited for other reasons<br>-----<br>&: member of the same patent family, corresponding document |                                               |